RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/565/85

Source: 150P

Date Processed by STIC: 1-27-06

ENTERED



IFWP

RAW SEQUENCE LISTINGPATENT APPLICATION: **US/10/565,185**DATE: 01/27/2006

TIME: 15:01:23

Input Set : A:\LEA 36823.txt

```
3 <110> APPLICANT: Bayer HealthCare AG
             Ellinghaus, Peter
     4
             Munter, Klaus
     5
      7 <120> TITLE OF INVENTION: Potassium channels with atrium-selective expression
      9 <130> FILE REFERENCE: Le A 36 823
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/565,185
C--> 11 <141> CURRENT FILING DATE: 2006-01-18
     11 <160> NUMBER OF SEQ ID NOS: 24
     13 <170> SOFTWARE: PatentIn version 3.3
     15 <210> SEO ID NO: 1
     16 <211> LENGTH: 1901
     17 <212> TYPE: DNA
     18 <213> ORGANISM: Homo Sapiens
     20 <400> SEQUENCE: 1
     21 gggcaggaag acggcgctgc ccggaggagc ggggcgggcg ggcgcgcggg ggagcgggcg
                                                                               60
                                                                              120
     23 gegggeggga gecaggeeeg ggeggggeg gggeggegg ggeeagaaga ggeggegge
     25 cgcgctccgg ccggtctgcg gcgttggcct tggctttggc tttggcggcg gcggtggaga
                                                                              180
     27 agatgetgea gteeetggee ggeagetegt gegtgegeet ggtggagegg cacegetegg
                                                                              240
                                                                              300
     29 cetggtgett eggetteetg gtgetggget aettgeteta eetggtette ggegeagtgg
                                                                              360
     31 tetteteete ggtggagetg ceetatgagg acetgetgeg ceaggagetg egcaagetga
     33 agcgacgctt cttggaggag cacgagtgcc tgtctgagca gcagctggag cagttcctgg
                                                                              420
     35 gccgggtgct ggaggccagc aactacggcg tgtcggtgct cagcaacgcc tcgggcaact
                                                                              480
                                                                              540
     37 ggaactggga cttcacctcc gcgctcttct tcgccagcac cgtgctctcc accacaggtt
     39 atggccacac cgtgcccttg tcagatggag gtaaggcctt ctgcatcatc tactccgtca
                                                                              600
                                                                              660
     41 ttggcattcc cttcaccctc ctgttcctga cggctgtggt ccagcgcatc accgtgcacg
                                                                              720
     43 teaccegeag geeggteete taetteeaea teegetgggg etteteeaag eaggtggtgg
                                                                              780
     45 ccatcgtcca tgccgtgctc cttgggtttg tcactgtgtc ctgcttcttc ttcatcccgg
     47 ccgctgtctt ctcagtcctg gaggatgact ggaacttcct ggaatccttt tatttttgtt
                                                                              840
                                                                              900
     49 ttatttccct qagcaccatt ggcctggggg attatgtgcc tggggaaggc tacaatcaaa
     51 aattcagaga getetataag attgggatea egtgttaeet getaettgge ettattgeea
                                                                              960
     53 tgttggtagt tctggaaacc ttctgtgaac tccatgagct gaaaaaaattc agaaaaatgt
                                                                             1020
     55 tctatgtgaa gaaggacaag gacgaggatc aggtgcacat catagagcat gaccaactgt
                                                                             1080
     57 ccttctcctc gatcacagac caggcagctg gcatgaaaga ggaccagaag caaaatgagc
                                                                             1140
     59 cttttgtggc cacccagtca tctgcctgcg tggatggccc tgcaaaccat tgagcgtagg
                                                                             1200
     61 atttgttgca ttatgctaga gcaccagggt cagggtgcaa ggaagaggct taagtatgtt
                                                                             1260
     63 catttttatc agaatgcaaa agcgaaaatt atgtcacttt aagaaatagc tactgtttgc
                                                                             1320
     65 aatgtcttat taaaaaacaa caaaaaaaga cacatggaac aaagaagctg tgaccccagc
                                                                             1380
     67 aggatgtcta atatgtgagg aaatgagatg tccacctaaa attcatatgt gacaaaatta
                                                                             1440
     69 tetegacett acataggagg agaataettg aageagtatg etgetgtggt tagaageaga
                                                                             1500
     71 ttttatactt ttaactggaa actttggggt ttgcatttag atcatttagc tgatggctaa
                                                                             1560
                                                                             1620
     73 ataqcaaaat ttatatttag aagcaaaaaa aaaaagcata gagatgtgtt ttataaatag
     75 gtttatgtgt actggtttgc atgtacccac ccaaaatgat tatttttgga gaatctaagt
                                                                             1680
     77 caaactcact atttataatg cataggtaac cattaactat gtacatataa agtataaata
                                                                             1740
```

Input Set : A:\LEA 36823.txt

81 actatagata ttttgtttct tttgatttct ctttatacta aagaatccag agttgctaca 18	00 60				
	01				
86 <210> SEQ ID NO: 2					
87 <211> LENGTH: 22					
88 <212> TYPE: DNA					
<213> ORGANISM: artificial sequence <220> FEATURE:					
92 <223> OTHER INFORMATION: primer 1					
<2235 OTHER INFORMATION: primer 1 <400> SEQUENCE: 2					
tgaagaagga caaggacgag ga					
tgaagaagga caaggacgag ga <210> SEQ ID NO: 3					
<211> LENGTH: 20					
00 <212> TYPE: DNA					
101 <213> ORGANISM: Artificial sequence					
103 <220> FEATURE:					
104 <223> OTHER INFORMATION: primer 2					
106 <400> SEQUENCE: 3					
107 gcctggtctg tgatcgagga	20				
110 <210> SEQ ID NO: 4 111 <211> LENGTH: 27					
111 <211> LENGTH: 27 112 <212> TYPE: DNA					
113 <213> ORGANISM: artificial sequence					
115 <220> FEATURE:					
116 <223> OTHER INFORMATION: probe					
118 <400> SEQUENCE: 4					
119 caggtgcaca tcatagagca tgaccaa	27				
22 <210> SEQ ID NO: 5					
23 <211> LENGTH: 2590					
124 <212> TYPE: DNA					
125 <213> ORGANISM: Homo Sapiens					
127 <400> SEQUENCE: 5					
128 tgccctgcgc ggagagcggc gagcgcagcc atgccccagg ccgcctccgg ggcagcagca	60				
130 geggeggeeg gggeegatge gegggeeggg ggeeggggg ggeegggeg	120 180				
132 ggacgatgaa gcggcagaac gtgcgcacgc tggcgctcat cgtgtgcacc ttcacctacc	240				
134 tgetggtggg egeegggte ttegaegege tggagtegga geeegagetg ategagegge 136 ageggetgga getgeggeag eaggagetge gggegeta eaaceteage eagggegget	300				
138 acgaggaget ggagegete gtgetgegee teaageegea caaggeegge gtgeagtgge	360				
140 gettegeegg eteettetae ttegeeatea eegteateae eaceategge taegggeaeg	420				
142 cggcacccag cacggatggc ggcaaggtgt tctgcatgtt ctacgcgctg ctgggcatcc	480				
144 cgctcacgct cgtcatgttc cagagcctgg gcgagcgcat caacaccttg gtgaggtacc	540				
146 tgctgcaccg cgccaagaag gggctgggca tgcggcgcgc cgacgtgtcc atggccaaca	600				
148 tggtgctcat cggcttcttc tcgtgcatca gcacgctgtg catcggcgcc gccgccttct	660				
150 cccactacga gcactggacc ttcttccagg cctactacta ctgcttcatc accctcacca	720				
152 ccatcggctt cggcgactac gtggcgctgc agaaggacca ggccctgcag acgcagccgc	780				
154 agtacgtggc cttcagcttc gtctacatcc ttacgggcct cacggtcatc ggcgccttcc	840				
156 tcaacctcgt ggtgctgcgc ttcatgacca tgaacgccga ggacgagaag cgcgacgccg	900				
158 agcaccgcgc gctgctcacg cgcaacgggc aggcgggcgg cggcggaggg ggtggcagcg	960				
160 cgcacactac ggacaccgcc tcatccacgg cggcagcggg cggcgggcggc ttccgcaacg 1	.020				

Input Set : A:\LEA 36823.txt

```
162 tetacgegga ggtgetgeac ttecagteca tgtgetegtg cetgtggtac aagaqeegeg
                                                                         1080
                                                                         1140
164 aqaaqctgca qtactccatc cccatgatca tcccgcggga cctctccacg tccgacacgt
166 gcgtggagca gagccactcg tcgccgggag ggggcggccg ctacagcgac acgccctcgc
168 gacgctgcct gtgcagcggg gcgccacgct ccgccatcag ctcggtgtcc acgggtctgc
                                                                         1260
170 acaqcctgtc caccttccgc ggcctcatga agcgcaggag ctccgtgtga ctgccccgag
                                                                         1320
172 ggacctggag cacctggggg cgcgggcggg ggacccctgc tgggaggcca ggagactgcc
                                                                         1380
174 cetgetgeet tetgeceagt gggaceeege acaacateee teaceaetet eececageae
                                                                         1440
176 ccccatctcc gactgtgcct gcttgcacca gccggcagga ggccgggctc tgaggacccc
                                                                         1500
178 tggggccccc atcggagccc tgcaaattcc gagaaatgtg aaacttggtg gggtcaggga
                                                                         1560
180 ggaaaggcag aagctgggag cctcccttcc ctttgaaaat ctaagaagct cccagtcctc
                                                                         1620
182 agagaccetg ctggtaccac accecacett cggaggggac ttcatgttcc gtgtacgttt
                                                                         1680
184 gcatctctat ttatacctct gtcctgctag gtctcccacc ttcccttggt tccaaaagcc
                                                                         1740
186 agggtgteta tgtecaagte accectaete ageceeaete eeetteetea teeceagetg
                                                                         1800
188 tgtctcccaa cctcccttcg tgttgttttg catggctttg cagttatgga gaaagtggaa
                                                                         1860
                                                                         1920
190 acccagcagt ccctaaagct ggtccccaga aagcaggaca gaaagaagga gggacaggca
192 ggcagcagga ggggcgagct gggaggcagg aggcagcggc ctgtcagtct gcagaatggt
                                                                         1980
                                                                         2040
194 cgcactggag gttcaagcta actggcctcc agccacattc tcatagcagg taggacttca
                                                                         2100
196 gccttccaga cactgccctt agaatctgga acagaagact tcagactcac cataattgct
198 gataattacc cactettaaa tttgtegagt gatttttage etetgaaaac tetatgetgg
                                                                         2160
200 ccactgattc ctttgagtct cacaaaaccc tacttaggtc atcagggcag gagttctcac
                                                                         2220
202 teceatttta cagatgagaa taetgaggee tggacaggtg aagtgaccag agageaaaag
                                                                         2280
204 gcaaaggggt gggggctggg tgcagtggct cacacctgta ttcccaacac ttttggaggc
                                                                         2340
                                                                         2400
206 tqaqqttqqa qqattgcttq aqcccagqaa ttcgaqacca gcctaggtga catagtgaga
208 ccccatctct acaaaaaata aaaaattaac caggtgtggt ggcacgtgcc tgggagtccc
                                                                         2460
210 agegaettgg gaggetgagg tgggaggatt gtttgageet gggaggtega ggetgtagtg
                                                                         2520
212 agecetgatt geaceaetgt acteeageet gggtgacagg geaagaceet gteteaaaaa
                                                                         2580
214 aaaaaaaaaa
                                                                         2590
217 <210> SEO ID NO: 6
218 <211> LENGTH: 19
219 <212> TYPE: DNA
220 <213> ORGANISM: artificial sequence
222 <220> FEATURE:
223 <223> OTHER INFORMATION: primer 1
225 <400> SEQUENCE: 6
226 acgtctacgc ggaggtgct
                                                                           19
229 <210> SEQ ID NO: 7
230 <211> LENGTH: 18
231 <212> TYPE: DNA
232 <213> ORGANISM: artificial sequence
234 <220> FEATURE:
235 <223> OTHER INFORMATION: primer 2
237 <400> SEQUENCE: 7
                                                                           18
238 tctcgcggct cttgtacc
241 <210> SEQ ID NO: 8
242 <211> LENGTH: 26
243 <212> TYPE: DNA
244 <213> ORGANISM: artificial sequence
246 <220> FEATURE:
247 <223> OTHER INFORMATION: probe
```

Input Set : A:\LEA 36823.txt

	<400> SEQUI						
							26
	<210> SEQ ID NO: 9						
	<211> LENG						
	<212> TYPE						
		NISM: Homo S	Sapiens				
	<400> SEQUI						
259	ctccgtccca	ggggagaagg	agaggcgtct	gcagggggca	gagaccgcag	ctacctgccg	60
261	ggtgcgcccc	ccacccagga	gcgctcgctt	cgcccccttt	cctcccccgc	ccccacctcc	120
263	ttattggtgc	tagtttgcag	cgcccagctc	ctgcgccttc	gcttcgcgtt	tgaatctggc	180
265	tcgccccttc	gtattatgtc	tgcactccga	aggaaatttg	gggacgatta	tcaggtagtg	240
267	accacatcgt	ccagcggctc	gggcttgcag	ccccaggggc	caggccagga	ccctcagcag	300
269	cagcttgtgc	ccaagaagaa	gcggcagcgg	ttcgtggaca	agaacggccg	gtgcaatgta	360
271	cagcacggca	acctgggcag	cgagacaagc	cgctacctct	cggacctctt	caccacgctg	420
273	gtggacctca	agtggcgctg	gaacctcttc	atcttcattc	tcacctacac	cgtggcctgg	480
275	cttttcatgg	cgtccatgtg	gtgggtgatc	gcctacactc	ggggcgacct	gaacaaagcc	540
			ttgcgtggcc				600
			caccatcggc				660
281	cccgagggca	tcatcctctt	cctcttccag	tccatcctgg	gctccatcgt	ggacgccttc	720
			caagatgtcc				780
			ctccatgagg				840
			catggtctcc				900
			gttccttccc				960
			ttttcttgtg				1020
			cctatcccag				1080
			tgtggaaaca				1140
			ttggggtcat				1200
	_		ctcccagttc				1260
			ggaaatgctt				1320
			acataattct				1380
			gctgcagaaa				1440
			aacttcagaa				1500
			agttccgggc				1560
			catgagccag				1620
			taggatggaa				1680
			acaaagcact				1740
			atgaggtaat				1800
			tttgagaacc				1860
			aggacatcat				1920
323	catcaagcat	gcaataatgt	gcaaattttg	catttagttt	tatogcatoa	tttatatata	1980
			ctggaaaaaa				2040
	_	_	tatgtattaa				2100
			gtgtgtgtgt				2160
			atacatacat				2220
			gtgcatgttt				2280
			tttagcctta				2340
			ttgggaggct				2400
			ccctgcaaaa				2460
			agtatagcat				2520
771	cocagageae	accageacee	ageaeageae	cyaacacccc	coacgaceee	cadaageege	2,20
							•

Input Set : A:\LEA 36823.txt

345 347 349 351	tagtactggg gagaaataat tgttgattaa tttgagaatt attcctttcc tagactaatt aaaatctgga aatctgttt gtatatgatc taatacaaag atgagctctg aacaaacact gaatcatgtt aatagacagt agccaagtta tattgaatat atcagaatct gtgtgaagtt acacaattaa ttgtccctgt ttcaaactga gtaaattgga aacattttct ttcttttct ggaaattttg tccattttaa aaaccaatca ttttaagaag acatgacaat gcaatgaaac	2580 2640 2700 2760 2820					
355	agatgataaa tatttatgct taaaatatgt atgtctaatt gagtctcttt tttattctgt tttcttgttt	2880 2890					
	<210> SEQ ID NO: 10						
	0 <211> LENGTH: 20						
	<pre> <212> TYPE: DNA <212> OPCANISM: artificial compande </pre>						
	<213> ORGANISM: artificial sequence						
	3 <220> FEATURE: 4 <223> OTHER INFORMATION: primer 1						
	6 <223> OTHER INFORMATION: primer 1 5 <400> SEQUENCE: 10						
	gttccacgca acatttgaag						
	o <210> SEQ ID NO: 11						
	1 <211> SEQ 1D NO: 11 1 <211> LENGTH: 20						
	2 <212> TYPE: DNA						
	3 <212> ORGANISM: artificial sequence						
	5 <220> FEATURE:						
376	5 <223> OTHER INFORMATION: primer 2						
	3 <400> SEQUENCE: 11						
379	gggacgacat gagaagcatt	20					
382	<210> SEQ ID NO: 12						
383	3 <211> LENGTH: 24						
	4 <212> TYPE: DNA						
385	5 <213> ORGANISM: artificial sequence						
387	7 <220> FEATURE:						
	8 <223> OTHER INFORMATION: probe						
	0 <400> SEQUENCE: 12						
	l cccaccccac cttacagtgt gaaa						
	4 <210> SEQ ID NO: 13						
	5 <211> LENGTH: 2510						
	5 <212> TYPE: DNA						
	7 <213> ORGANISM: Homo Sapiens						
	<400> SEQUENCE: 13	60					
	cggcggcagc agcccatgcc tccggtgcaa cagctgcgcc tcctccggtg ccccggcggc gggggcggga gataacctgt ccctgctgct ccgcacctcc tcgcccggcg gcgccttccg	120					
	gaccegcace tectegeege tgtegggete gteetgetge tgetgetget getegtegeg	180					
		240					
	ccggggcagc cagctcaatg tgagcgagct gacgccgtcc agccatgcca gtgcgctccg gcagcagtac gcgcagcagt ccgcgcagca gtcggcgtcc gcctcccagt accaccagtg	300					
	ccacagootg cagooogoog ccagooccac gggcagootc ggcagtotgg gctccgcgcc	360					
	congeteteg caccaccacc accaccegca conggegorae caccageacc accageccca	420					
	ggcgcgccgc gagagcaacc ccttcaccga aatagccatg agcagctgca ggtacaacgg	480					
	gggcgtcatg cggccgctca gcaacttgag cgcgtcccgc cggaacctcc acgagatgga	540					
	ctcagaggcg cagcccctgc agccccccgc gtctgtcgga ggaggtggcg gcgcgtcctc	600					
	cccgtctgca gacgctgccg ccgccgccgc tgtttcgtcc tcagcccccg agatcgtggt	660					
	gtctaagccc gagcacaaca actccaacaa cctggcgctc tatggaaccg gcggcggagg	720					
		780					
424	cagcactgga ggaggcggcg gcggtggagg gagcgggcac ggcagcagca gtggcaccaa	, , ,					

VERIFICATION SUMMARY

DATE: 01/27/2006

PATENT APPLICATION: US/10/565,185

TIME: 15:01:24

Input Set : A:\LEA 36823.txt

Output Set: N:\CRF4\01272006\J565185.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date